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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,180	12/08/2003	Nico N. Raczek	02/078 NUT	2906
38263	7590	12/29/2004	EXAMINER	
PROPAT, L.L.C. 425-C SOUTH SHARON AMITY ROAD CHARLOTTE, NC 28211-2841			SHIPPEN, MICHAEL L	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,180

Applicant(s)

RACZEK ET AL.

Examiner

MICHAEL L. SHIPPEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/08/03; 05/07/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112¹

Claims 1-15 are rejected under 35 USC 112, second paragraph, as failing to particularly point out the claimed invention. The terms "sorboyl" and "benzoyl" are not ionic groups as would be required by the "R₃" group which confuses the claims. It appears that "sorbate" and "benzoate" are intended². The parenthetical expression "(trans, trans CH₃-CH=CH=CH=CH-COO)" is superfluous and inaccurate. It does not appear to help define the claim since "sorbate" is a known group having an art recognized structure. Moreover, the structure given mistakenly contains an additional double bond and a nonexistent pentavalent carbon. It is suggested that "(trans, trans CH₃-CH=CH=CH=CH-COO)" be deleted. In claims 2-12 it is unclear what is actually being claimed. If compositions are intended, then a least two components need to be recited. As written, the claims read on the compounds *per se*. Moreover, it is not clear what applicants would or would not considered to be within the purview of "a food", "an animal feed", "a cosmetic", "an industrial product", "a requisite", "a packaging", "a drug", "a preservative", "a surface treatment" or "food or hospital products".

¹ The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 112 that form the basis for the rejections under this section made in this Office action:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

² It would appear that the same misnaming appears in the specification and should be corrected likewise.

Claim 15 is rejected under 35 USC 112, second paragraph, as failing to particularly point out the claimed invention. There is no actual process step recited, merely the intended result of unidentified processes. There is no indication of actual reactants or reaction condition contemplated. It is not clear if "quaternary ammonium" is limited to only those moieties within the purview of claim 1 since the term literally reads on moieties outside the purview of claim 1.

Claim Rejections - 35 USC § 102³

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4,804,492. Note the examples and the method of preparation set forth in last full paragraph of column 5. As to claims 2-12 that recite intended use, it is considered that the claims read on the prior composition. First, some of the intended uses are specifically taught by the reference. Second, as pointed out above, the claims read on the compounds *per se*. Third, the recitation of and intended use does not define a composition different from the prior art composition.

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 55-115439. The reference teaches a composition comprising potassium sorbate and $C_{14}H_{29}(PhCH_2)NMe_2^+Cl^-$ in water⁴. This composition would inherently form the claimed

³ The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

⁴ Note the abstract provided. While an abstract is provided, the rejection is over JP 55-115439.

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compound. As to claims 2-12 that recite intended use, it is considered that the claims read on the prior composition. First, some of the intended uses are specifically taught by the reference. Second, as pointed out above, the claims read on the compounds *per se*. Third, the recitation of and intended use does not define a composition different from the prior art composition.

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4,585,795. The reference teaches a composition comprising sorbic acid and BAC or DMC, note the first complete Table in column 4. This composition would inherently form the claimed compound. As to claims 2-12 that recite intended use, it is considered that the claims read on the prior composition. First, some of the intended uses are specifically taught by the reference. Second, as pointed out above, the claims read on the compounds *per se*. Third, the recitation of and intended use does not define a composition different from the prior art composition.

Claim Rejections - 35 USC § 103⁵

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,804,492 optionally in view of USP 3,361,794. USP 4,804,492 is applied as above. In addition to the examples, the reference generically teaches the claimed

⁵ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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compounds, note compound within the purview of formula (I). The reference does not specifically exemplify the instant compound. However, the generic teaching indicates to one of ordinary skill in the art that species falling within the generic disclosure, including the instantly claimed compound, would possess the prior art use. It is well within the skill of the artisan to select among the alternatives of the reference to afford compounds possessing the prior art use, *In re Lemin*, 141 USPQ 814. Also, the reference discloses homologues of the claimed compounds. Homologues are a class of compounds differing only by methylene linkages and possessing similar structures. Compounds of a homologous series are recognized as possessing a community of properties in common. Accordingly, it would have been obvious to one of ordinary skill in the art the interchange of these homologous substituents in the prior art compound would afford closely related structures and compounds possessing similar properties. As to the claims that recited an intended use, this is not seen to distinguish the claims from the prior art composition as pointed out above. In addition it is known in the art that the properties of the prior compounds make them suitable for a variety of uses. As is shown by USP 3,361,794 such properties make such compounds suitable for use in the applications listed in the bottom portion of column 3. In view of the close structural similarity of the compounds of USP 3,361,794, one would readily recognize that the compounds of USP 4,804,492 would be suitable in the same applications.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 55-115439. JP 55-115439 is applied as above. In addition to the examples, the reference generically teaches the claimed compounds, note the compounds within the

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purview of the quaternary ammonium moiety. The reference does not specifically exemplify the instant compound. However, the generic teaching indicates to one of ordinary skill in the art that species falling within the generic disclosure, including the instantly claimed compound, would possess the prior art use. It is well within the skill of the artisan to select among the alternatives of the reference to afford compounds possessing the prior art use, *In re Lemin, supra*. Also, the reference discloses homologues of the claimed compounds. Homologues are a class of compounds differing only by methylene linkages and possessing similar structures. Compounds of a homologous series are recognized as possessing a community of properties in common. Accordingly, it would have been obvious to one of ordinary skill in the art the interchange of these homologous substituents in the prior art compound would afford closely related structures and compounds possessing similar properties. As to the claims that recited an intended use, this is not seen to distinguish the claims from the prior art composition as pointed out above.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,585,795. USP 4,585,795 is applied as above. In addition to the examples, the reference generically teaches the claimed compounds, note compounds within the purview of the quaternary ammonium moieties disclosed in column 2. The reference does not specifically exemplify the instant compound. However, the generic teaching indicates to one of ordinary skill in the art that species falling within the generic disclosure, including the instantly claimed compound, would possess the prior art use. It is well within the skill of the artisan to select among the alternatives of the reference to afford compounds

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possessing the prior art use, *In re Lemin, supra*. Also, the reference discloses homologues of the claimed compounds. Homologues are a class of compounds differing only by methylene linkages and possessing similar structures. Compounds of a homologous series are recognized as possessing a community of properties in common. Accordingly, it would have been obvious to one of ordinary skill in the art the interchange of these homologous substituents in the prior art compound would afford closely related structures and compounds possessing similar properties. As to the claims that recited an intended use, this is not seen to distinguish the claims from the prior art composition as pointed out above.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 3,361,794. The reference discloses homologues of the claimed compounds, note the compounds embraced the formula of column 1. Homologues are a class of compounds differing only by methylene linkages and possessing similar structures. Compounds of a homologous series are recognized as possessing a community of properties in common. Accordingly, it would have been obvious to one of ordinary skill in the art the interchange of these homologous substituents in the prior art compound would afford closely related structures and compounds possessing similar properties.

Conclusion

The remaining references are cited as of interest.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Michael L. Shippen** whose telephone number is **(571) 272-0647**. The Examiner's normal tour of duty is 7:30 AM to 4:00 PM. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(571) 272-1600**. The official group FAX machine number is **571-273-8300**.

MShippen
December 26, 2004

A handwritten signature in black ink, appearing to read "Michael L. Shippen", is positioned above the printed name and title.

MICHAEL L. SHIPPEN
PRIMARY EXAMINER
ART UNIT 1621